

Claims:

1. A fixed focus handy ovulation tester, the said ovulation tester comprising:
an inner casing (1) having a top and a bottom end;
5 a controllable illuminating assembly (2) located inside the inner casing and near the bottom end of the inner casing and being sealed at the bottom by a bottom face plate (3), and
a fixed focus eye piece assembly (4) having a bottom inner portion for placing a biological specimen and a top outer portion for viewing the specimen being removably located at the top end of the inner casing.
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2. The fixed focus handy ovulation tester as claimed in claim 1, wherein the same is further provided with an outer case (5) for protection.
3. The fixed focus handy ovulation tester as claimed in 2, wherein an inner surface of the outer case is provided with an outer case sleeve (11).
- 15 4. The fixed focus handy ovulation tester as claimed in claim 1, wherein the inner casing is provided with a self locating and holding rib (21) at a substantially lower portion for conveniently guiding and holding the outer case to the inner casing.
5. The fixed focus handy ovulation tester as claimed in claim 1, wherein the fixed focus eye piece assembly comprises of a sealed housing (111) having a viewing
20 slot (112) at a top end and incorporated with a single plano-convex rod lens (113), wherein the focus of the rod lens lies on a flat surface (114) of the same whereupon the biological specimen is applied.
6. The fixed focus handy ovulation tester as claimed in claim 1, wherein the fixed focus eye piece assembly comprises of a glass holder assembly (33) integrated
25 with a lens holder assembly (31), wherein the glass holder assembly and the lens holder assembly are maintained at a predetermined distance by a separating means (32).
7. The fixed focus handy ovulation tester as claimed in claim 6, wherein the glass holder assembly is constituted as a sub assembly comprising of a housing (36)
30 fitted with a Plano-convex field lens (37) having a curved surface and a flat surface, wherein the flat surface acts as an object surface where upon the biological specimen is located / applied.

8. The fixed focus handy ovulation tester as claimed in claim 7, wherein the thickness of the Plano convex field lens is equal to or greater than the radius of the lens such as a hyper hemispherical lens or a rod lens
9. The fixed focus handy ovulation tester as claimed in claim 7, wherein the Plano
5 convex field lens is made of glass or is made of transparent plastic (37) glued using transparent optical cement to Plano-Plano glass plate (38), thereby compensating the adverse effect of plastic surface deviation / warping of flat glued surface and serving as a hard glass surface for application of biological specimen to enable repeated application and cleaning.
- 10 10. The fixed focus handy ovulation tester as claimed in claim 6, wherein the glass holder assembly is constituted as a sub assembly comprising of a housing (36) fitted with a bi-convex lens (43) and a Plano-convex field lens (42), wherein the biconvex lens is placed above a curved surface of the field lens and the flat surface acts as an object surface where upon the biological specimen is located /
15 applied.
11. The fixed focus handy ovulation tester as claimed in claim 6, wherein the lens holder assembly is constituted as a sub assembly comprising a housing (34) fitted with a Plano convex eye lens (35).
12. The fixed focus handy ovulation tester as claimed in claim 11, wherein the eye
20 lens is made of transparent plastic (35) and is glued using transparent optical cement to Plano-Plano polished glass plate (38), serving to compensate for the adverse optical effect plastic surface deviation / warping and offering a hard exterior glass surface to enable cleaning.
13. The fixed focus handy ovulation tester as claimed in claim 1, wherein in the fixed
25 focus eyepiece assembly and the number of Air to glass surfaces is restricted to four, including the surface on which the biological specimen is smeared for observation.
14. The fixed focus handy ovulation tester as claimed in claim 1, wherein the glass
30 holder assembly (33), the lens holder assembly (31), and the separating means (32) are sealed to form the fixed focus eyepiece.

15. The fixed focus handy ovulation tester as claimed in claim 1, wherein a metal sleeve (51) is further provided inside the inner casing.
16. The fixed focus handy ovulation tester as claimed in claim 1, wherein the controllable illuminating assembly comprises of a light source (52), an associated power supply means (53) and a switch means (54).
17. The fixed focus handy ovulation tester as claimed in claim 1, wherein the light source means is selected from the group comprising of a bulb and LED.
18. The fixed focus handy ovulation tester as claimed in claim 1, wherein the power supply is a battery, wherein the battery is a pencil-cell battery or a button cell battery.
19. The fixed focus handy ovulation tester as claimed in claim 1, wherein the LED is masked by a diaphragm (55), the diameter of the diaphragm is 1.6 mm.
20. The fixed focus handy ovulation tester as claimed in claim 1, wherein the fixed focus handy ovulation tester further comprises of a holder (56) for holding the battery and the LED.
21. The fixed focus handy ovulation tester as claimed in claim 1, wherein the biological specimen is saliva.